CHAPTER 3

PROJECT DESCRIPTION

This chapter provides a description of the proposed Bulk Materials Processing Center (BMPC) use permit amendment changes and related actions (Project). The owner of the property is West County Landfill, Inc. (Applicant). The operator of the facilities is West Contra Costa Sanitary Landfill, Inc. (WCCSL, Inc.). The Applicant and WCCSL, Inc. are subsidiaries of Republic Services, Inc. In this EIR, the West Contra Costa Sanitary Landfill site is referred to as the WCCSL. Primary sources of information for the Project were supplied by the Applicant. They include the Report of Disposal Site Information (RDSI),[1] the BMPC Final Development and Improvements Plan (FDIP),[3] the Transfer/Processing Station Report (TPR),[43] the Report of Composting Site Information (RCSI),[4] and the BMPC Land Use Permit (LUP) Application.[28] This chapter is structured to provide an introduction; a discussion of the existing facilities; the purpose and need for the proposed Project; and the description of the proposed Project, including schedule for implementation and required permits and approvals.

A. INTRODUCTION

An introduction to the proposed Project is provided below. This discussion includes a description of the site location and access, the history of the WCCSL, and a description of the West County Integrated Resource Recovery Facility.

1. Location and Access

Figures 1-1 and 1-2 show the regional location and local vicinity of the WCCSL. The 340-acre site borders San Pablo Bay and is located in the North Richmond area. The northern portion of the site is located within unincorporated Contra Costa County (County) area and the southern portion is within the Richmond City (City) limits. Access to the WCCSL is provided in the near vicinity of the landfill via Parr Boulevard leading west to the site and the Richmond Parkway leading north and south to Parr Boulevard.

2. History of the WCCSL

The original use permit for the site was issued by the County in December 1952. In early 1953, Richmond Sanitary Service, Inc. began operations at the site accepting wastes hauled by collection trucks. In 1956, full site operations commenced when public self-hauled wastes were accepted for disposal. The site now receives wastes collected by franchised haulers in the western County, and other Bay Area communities, and self-hauled wastes. In 1978, the County

Health Services Department and the State Solid Waste Management Board (now the California Integrated Waste Management Board [CIWMB]) adopted the initial Solid Waste Facility Permit (SWFP) for the site.

Operational changes have occurred over time as new regulations, permits, and recycling operations have been implemented. In 1993, WCCSL, Inc. expanded recycling operations and received City and County land use permits for the existing BMPC. The BMPC originally consisted of a composting facility, a concrete processing operation, and wood waste processing facility.

In 1996, a 4-acre soil remediation facility began operation at the WCCSL. The purpose of the facility was to thermally treat hydrocarbon-contaminated soil, which could then be used either on site or off site for various applications. The soil remediation facility operation was terminated at the end of 2001, and the processing equipment was removed in early 2003.

In December 2000, a Waste Shuttle Facility began operation on top of the landfill central plateau. The shuttle facility is part of landfill operations and consists of an outdoor asphalt pad, a portable recyclables sorting conveyor, litter fences, and debris boxes to shuttle sorted recyclables and trash residue. The Waste Shuttle Facility was developed to provide an all-weather surface for drop-off of waste and provide sorting capability to increase waste diversion.

3. West County Integrated Resource Recovery Facility

The cities of El Cerrito, Richmond, San Pablo, Pinole, and Hercules formed the West Contra Costa Integrated Waste Management Authority (Authority). The Authority has guided the development of the Integrated Resource Recovery Facility (IRRF). The IRRF consists of the processing center (BMPC) at the WCCSL and the recycling center/transfer station (Central IRRF). In 1992, the County certified the EIR for the West County IRRF.[9] The Central IRRF began operation in 1993. This facility is located at 101 Pittsburg Avenue, about 1 mile from the WCCSL between Third Street and Central Street in the unincorporated area of North Richmond. The Central IRRF is operated by West County Resource Recovery, Inc. Through SWFP No. 07-AA-0034, the Central IRRF is permitted to accept up to 1,200 tons per day (TPD) of franchised residential and commercial waste, self-hauled waste, and source-separated recyclables. Operations at the IRRF include a materials recovery facility, a transfer station, a public buyback/drop-off center, and a household hazardous waste collection facility. Residual materials are transported to the WCCSL Class II landfill for disposal and, once this landfill closes, are expected to be transported to the Potrero Hills Landfill in Solano County.

B. EXISTING FACILITY DESCRIPTION

Prior to discussing the proposed Project, a discussion of the existing facility is provided. The WCCSL site consists of several distinct operations that function as a whole.

1. Facility Boundaries

Figure 3-1 is the existing site plan for the WCCSL. The 340-acre site was originally constructed on filled marshlands and tidal land. As illustrated on Figure 3-1, the WCCSL site contains two Waste Management Units: an inactive Class I waste disposal area (Hazardous Waste Management Facility [HWMF]) and a Class II municipal solid waste (MSW) landfill. Existing BMPC operations are sited on the MSW landfill. The northern portion of the WCCSL is within the County's jurisdiction while the remainder of the site is within Richmond's city limits. The 340-acre site is composed of the following areas:

- Class II MSW landfill—160 acres
- Class I HWMF—28 acres
- Area A – Pollution control facilities and stockpile area—12 acres
- Area B – Runoff retention pond—80 acres
- Area C – Tidal water area—60 acres

2. Class II MSW Landfill

The MSW landfill is a Class II site limited to the disposal of non-hazardous solid wastes as defined by Title 27, Section 20220 of the California Code of Regulations (27 CCR §20220). The facility is equipped with State-required environmental controls for leachate (liquid that is derived from water contacting solid wastes), storm water runoff, and landfill gas (LFG), which is gas produced from the decomposition of organic solid wastes in the landfill. A leachate barrier wall surrounds the landfill to prevent leachate from migrating off site, and prevent adjacent surface water from entering the site. Leachate is collected and transported to the nearby West County Wastewater District (WCWD) plant for treatment. LFG is collected and utilized as fuel in an on-site power plant. The WCCSL is underlain by young bay sediments known locally as Bay Mud ranging from 40 to 70 feet in thickness.

The Class II landfill normally receives from 700 to 1,100 TPD of MSW from various jurisdictions in the San Francisco Bay Area region. This range in volume of waste represents approximately 650 TPD7 (365 days per year average). Wastes are delivered in a variety of vehicles, including large transfer trucks, garbage trucks, pickups, and passenger cars. As will be discussed later in this chapter, the Applicant has projected a remaining landfill life expectancy for the existing permitted landfill that ranges between November 2003 and March 2005

depending on various assumptions. The Regional Water Quality Control Board (RWQCB) has ordered that the Class II landfill cease landfilling waste on or before January 31, 2006. Construction performance specifications regulate postclosure land uses on the final landfill cover cap and are included in Section 3.2 of the WCCSL Postclosure Maintenance Plan. Excerpts from that section are included in Appendix 3A.

Operation of the Class II landfill is governed by a variety of State regulations. 27 CCR § 20680 provides that wastes be covered by a minimum of 6 inches of compacted soil and/or alternative daily cover (ADC) material at the end of each day's operation. ADC is cover material other than earthen material that can be placed on the surface of the active face. 27 CCR § 20690 provides the general and specific requirements for use of ADC. A series of materials are identified which can be used without first conducting site specific demonstration projects. The following ADC materials are either currently used or will be used at this Class II landfill:

- Treated auto shredder waste which is shredded on-site. (existing)
- Wastewater treatment plant sludge (biosolids) mixed with soil. (existing)
- Construction and demolition (C&D) debris which includes mixtures of building materials such as wood, plaster, sheet rock, shingles, metal, bricks, concrete, and dirt. (proposed)
- Other materials such as geomembrane blanket tarp fabrics, sprayed on waste paper fiber form, diatomaceous earth filter cake sludge, and possibly excess or off-spec compost. (existing)

These ADC materials are identified in 27 CCR § 20690 and their use must meet CIWMB standards. The ADC types and methods of use are detailed in the Applicant's proposed revisions to their RDSI and Postclosure Plan.[69] Use of any materials identified above which require processing (shredding or grinding) at the WCCSL is temporarily suspended by the CIWMB and the County Environmental Health Department serving as the Local Enforcement Agency (LEA). Wood and yard debris and compost are still allowed to be processed on site and used as ADC.

3. Waste Shuttle Facility

As discussed earlier, the shuttle facility began operation in 2001 and resulted in several improvements to WCCSL waste disposal operations, including increased efficiency in processing recyclables, better litter control, increased diversion of recyclables, improved public safety of customers unloading wastes, improved safety of WCCSL personnel, better control of stormwater runoff, and streamlined operations at the working face of the landfill. Vehicles accessing the shuttle facility stop at the scale house and then proceed along "Recycling Lane." Traffic control personnel are on site at the shuttle facility to direct users to the unloading points. The proposed WRC would replace operations now conducted at the Waste Shuttle Facility.

4. Bulk Materials Processing Center

The BMPC occupies about 50 acres of the Class II MSW landfill area. The location of the BMPC on top of the capped Class II landfill results in these operations being governed by the landfill Postclosure Plan and a variety of regulations that stipulate allowable and prohibited activities. The BMPC facilities must be in conformance with the landfill Closure and Postclosure Plan and the landfill cap grading and integrity must be preserved. Components of the existing BMPC are discussed below.

a. Composting Facility. The WCCSL Composting Facility has been developed in phases and is one component of the BMPC. Initially, the Composting Facility began as a demonstration project, which operated between the summer of 1993 and November 1994 and handled about 6,000 tons of yard debris annually. Interim operations continued until Phase 2 began in November 1995, when the Composting Permit was issued. Phase 2 operations handled 10,000 tons of green materials annually, or 27 tons per day, 7 days per week (TPD7) average. These materials are temporarily stockpiled, shredded, placed in windrows, and monitored for 2 to 3 months. After the necessary aeration and watering, the finished compost is screened and most is sold for use off site. The existing composting operations area is approximately 18 acres in size. Wood wastes are also processed into mulch and boiler fuel (biofuel). Phase 3 of the Composting Facility is one component of the proposed Project.

b. Soil Remediation Facility. This facility operated for about 5 years, beginning in 1996 and terminating in 2001. In 2000, about 35,000 cubic yards (CY) of hydrocarbon-contaminated soils were treated at the facility. The treated soils were used as landfill cover, off-site select backfill soil, or reclaimed by combining with other soil material. Equipment from the building has been removed and the facility steam-cleaned to remove contaminants. This building is the proposed site for the waste recycling center discussed later in this chapter.

c. Concrete/Asphalt Crushing Facility. As shown on Figure 3-1, this facility is currently located near the entrance of the WCCSL. About 350 TPD of inert materials are crushed and screened into different sizes of rock and gravel products. The proposed Project involves relocating this facility to the landfill central plateau adjacent to the Composting Facility.

5. Class I Hazardous Waste Management Facility

The HWMF has not received wastes since November 1985. The Closure Plan for this site was approved in 2000 by the State Department of Toxic Substances Control and final cap construction has been completed. The HWMF Closure Plan involves no disturbance to underlying hazardous materials, placement of a soil and fabric cap over the entire site, and processing of the leachate and LFG. Treatment of the leachate collected from the HWMF is provided by an adjacent (on-site) facility that treats approximately 20 gallons per minute. Following treatment and testing, the leachate is conveyed to the nearby WCWD treatment plant

in accordance with the provisions of the WCWD Sewer Use Ordinance No. 9-19-89 and permit No. 011 issued by WCWD to the Applicant.

6. West County Landfill Power Plant

The power plant, as shown on Figure 3-1, is located along the southern border of the HWMF. This plant generates about 3 megawatts of electricity from LFG, enough to power about 3,000 homes. Electricity is used on site with the excess marketed to the local power grid.

C. PROJECT DESCRIPTION

For purposes of this EIR, the Project consists of the Applicant's proposed amendments to their existing BMPC use permits and related actions, including a vertical expansion (height increase) of the landfill and a Public Access Trail (Trail). These permits were issued in 1993 by the County (LUP No. 2054-92, as amended by LUP 2043-94) and the City (under Conditional Use Permit [CUP] No. 92-53). These permit changes, which are discussed further in this section, can be summarized as follows:

- COMPOSTING: Relocate operations and increase the amount and types of compostables processed.

- ASPHALT/CONCRETE PROCESSING: Relocate operations and increase the amount of asphalt/concrete processed.

- WASTE RECYCLING CENTER: Construction and operation of the Waste Recycling Center (WRC). The proposed WRC would be built through adaptive reuse of the former Soil Remediation Facility building to recycle, sort, and transfer for disposal of waste from self-haulers, industrial debris boxes, and other commercial customers that are not processed at the existing Central IRRF. An alternative on-site location for the WRC is being considered at Area A (see Figure 1-2) that would include construction of a new facility (in lieu of adaptive reuse of an existing building).

- WET/DUSTY MATERIAL BLENDING: Startup of a new wet waste/dusty material processing activity involving blending of high-moisture-content muds and sludges with waste soil and dusty wastes, producing a product at the WCCSL suitable for alternative daily cover, final cover, or off-site use. Possible off-site uses include ADC material for other landfills, trench backfill material or road or building subbase, and replacement backfill for brownfield sites where a soil backhaul is practiced to fill excavations where materials were excavated for treatment or disposal.

- WOOD RECOVERY: Relocate operation and increase the amount of wood waste processed and recovered.

- SOIL RECLAMATION: Startup of a new soil reclamation activity involving the reclamation of non-contaminated soils through screening and use on site, and the addition of sand and/or compost to produce top soil for off-site use.

- BIOSOLIDS/DREDGED MATERIAL SPREADING: Start up of a new activity involving the spreading of wet dredged materials and/or biosolids (sludge from wastewater treatment facilities) on the capped portions of the landfill, and the southern and eastern slopes.

- CHANGE IN FACILITY OPERATING HOURS: Expanded hours proposed for equipment maintenance, waste acceptance, materials processing, and transport.

The Project also consists of proposed actions, not subject to the use permit amendments. Because of greater amounts of unanticipated settlement along portions of the east-west ridgeline of the landfill's final cap, the Applicant is seeking to increase the existing permitted landfill elevation from 130 feet mean sea level (msl) to 160 feet msl, which would be consistent with the Waste Discharge Requirements for the WCCSL recently adopted by the RWQCB on June 19, 2002.[29] These elevations represent top of wastes and do not reflect the soil cap that would be placed on top of this elevation. In general, a 4-foot cap will overtop the wastes, but a 7-foot cap will be provided in the postclosure operations area. A revision to the Applicant's SWFP No. 07-AA-0001 is necessary to allow for this height increase. No increase in permitted disposal rates is proposed with the landfill height increase. It is intended that this Environmental Impact Report (EIR) provide the necessary California Environmental Quality Act (CEQA) documentation that would enable the LEA and the CIWMB to consider issuance of the revised SWFP.

Finally, the 1993 County LUP and City CUP for the BMPC required the Applicant to submit a Public Access Plan outlining an approach for developing a trail that allows public access to the shoreline on the WCCSL site. Reports were prepared in 1994 and 1995 conceiving of a trail around the perimeter of the property. During 2000 and 2001, more details were developed that are reported in the Applicant's FDIP that address phasing, construction, and maintenance.[2] While previous CEQA documentation for projects at the WCCSL has generally recognized the Trail, no CEQA document has been prepared to support implementation of its currently proposed alignment in the context of proposed Project facilities. Because further details on the Trail now exist, the proposed alignment has changed, and its implementation requires approval by the LEA as part of their SWFP, it is intended that this EIR also include the trail as part of the Project. A copy of the Applicant's Public Access Plan is included as Appendix 3K.

A summary of the proposed Project Description is provided below. Details not otherwise presented below or in technical appendices may be found in appropriate chapters of this EIR.

1. Purpose and Need for Proposed Project

The Applicant has identified the following purpose and need for the proposed Project:

- To further reduce reliance on landfill disposal by expanding on-site recycling operations and help comply with State-required AB 939 waste diversion mandates.

- To operate a WRC and transfer station to handle self-haul volumes currently landfilled in the WCCSL, as well as capacity for new business (to be developed on an ongoing basis), and to achieve even greater diversion of materials from the waste stream than is accomplished now in the Waste Shuttle Facility.

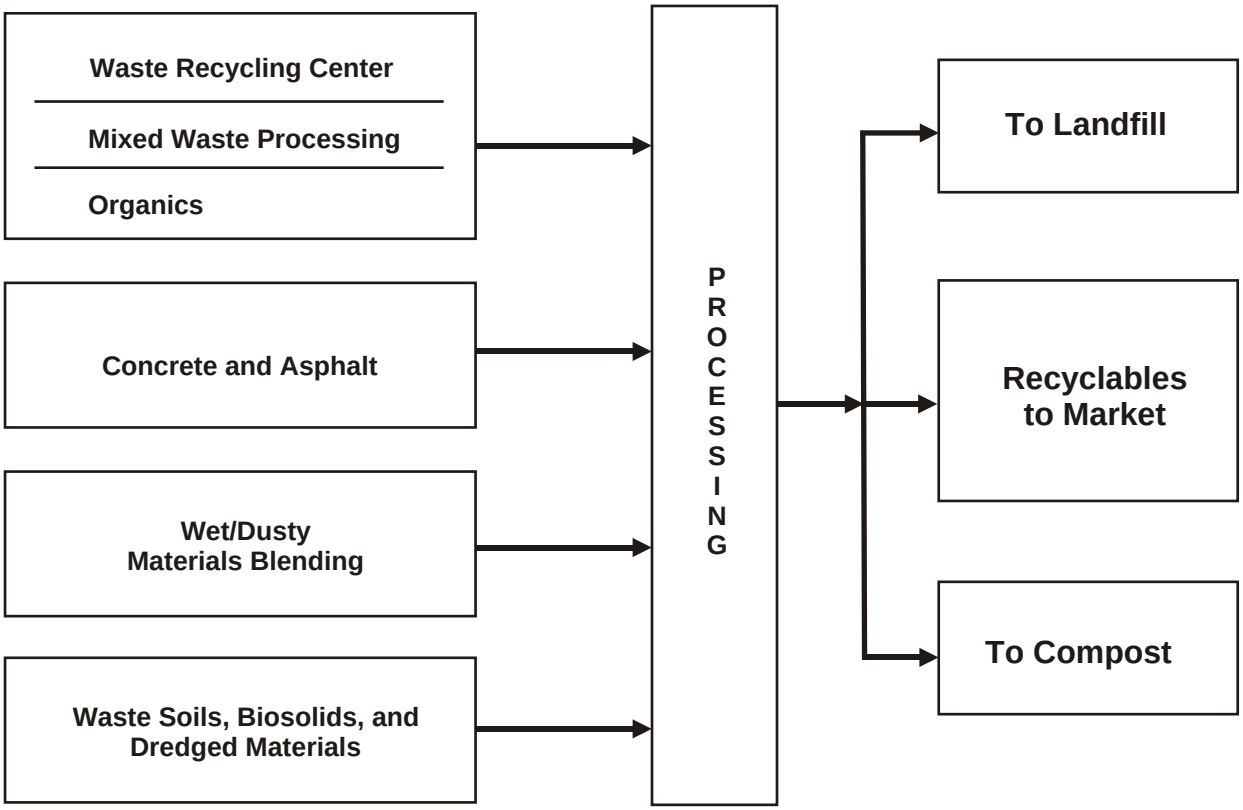
- To help facilitate development of the Trail around the WCCSL, which will provide recreational opportunities and increase access to the Bay and which will also offer a setting for wildlife viewing and environmental education.

- To correct the areas of the Class II landfill's central plateau that have experienced excessive settlement, and to restore the landfill by placing additional MSW subbase, which will allow the foundation layer, barrier layer, and top landfill cover surface to be placed at the correct elevations and slope so that drainage can be properly managed.

2. Proposed Use Permit Changes

Figure 3-2 is a simplified material flow diagram for the BMPC showing the incoming materials, processing, and ultimate deposition of the products. Discussion on the proposed use permit changes is provided below. Figure 3-3 shows the site development plan. Table 3-1 summarizes the proposed use permit changes while Table 3-2 summarizes the proposed changes in facility operating hours. Table 3-3 summarizes the average and peak daily waste quantities proposed to be received at the BMPC for each of the operations areas. For the total BMPC, the average would be 3,935 TPD7 and the peak would be 5,509 TPD.

a. Composting. The WCCSL BMPC Composting Facility consists of several main components, including the composting area, screening area, and loadout area. The primary changes to the current permits for this facility are to increase the amount and types of materials processed, which will require a physical expansion of site operations. The Composting Facility is currently within the City and would be expanded into both jurisdictions. Full details of the Composting Facility are included in the RCSI.[4] A summary of the composting operations plan is included in Appendix 3B.



Note: Adapted from Appendices 3B through 3H.

Figure 3-2 Simplified Material Flow Diagram for BMPC

Table 3-1. Summary of Proposed Changes to Quantities and Location for WCCSL Bulk Materials Processing Center Operations

Action	Existing permitted quantities	Proposed permitted quantities[b,c]	Approximate incremental change	Proposed location on site
Composting: Expand the volume of compostibles and mulch to be processed; process compost and mulch in both City and County area; change composting permit to handle mixed wastes, biosolids and ag wastes.	10,000 tons of compostibles received per year (EIR); 11,600 CY of materials undergoing composting on site at one time (SWFP); 5,000 tons of compost on site at one time (RCUP).[a]	150,000 CY or 56,000 tons of materials undergoing composting; 32,000 CY or 12,800 tons of unscreened compost in storage; 64,000 CY of 25,600 tons of finished screened compost product in storage; 164,300 tons of compostibles processed per year.	• 5 X increase in material undergoing composting • 8 X increase in material stored (finished and unscreened) • 16 X increase in compostibles processed per year	• Currently in City and County; would be expanded in area mostly in City.
Concrete/Asphalt Processing: Move location of concrete processing facility to west end of landfill central plateau; expand the volume of concrete/asphalt materials to be processed and remove restriction on wet weather processing or storage of asphalt.	Maximum tons of concrete and asphalt rubble received per year not specified; maximum of 30,000 tons or 24,000 CY of concrete debris on site at one time; (CLUP), and maximum of 1,600 tons or 800 CY of asphalt on site at one time (CLUP).	110,000 CY or 175,000 tons of unprocessed broken concrete or asphalt rubble in storage; 60,000 CY or 95,000 tons of crushed concrete and asphalt products in storage; 528,000 tons of concrete and asphalt processed per year.	• 8.5 X increase in storage of processed and unprocessed concrete and asphalt (to 270,000 tons).	• Majority of operation in City, some in County.
Waste Recycling Center: Construct and operate Waste Recycling Center in Soil Remediation Building on Class II landfill; recycling of mixed solid wastes; loadout of nonrecovered materials into transfer trailers.	Not now included	1,000 tons of mixed solid wastes temporarily stored on site; 1,600 CY of recycled materials in storage (cardboard, wood, metals, glass, plastic); 365,000 tons of mixed wastes handled per year.	• New operation to serve customers that previously utilized Waste Shuttle Facility and Class II landfill.	• In County (alternative location proposed in City).

Table 3-1. Summary of Proposed Changes to Quantities and Location for WCCSL Bulk Materials Processing Center Operations (continued)

Action	Existing permitted quantities	Proposed permitted quantities[b,c]	Approximate incremental change	Proposed location on site
Wet/Dusty Material Blending: (County and City Permits) Add new operation to BMPC.	Not now included	5,000 tons and 10,000 gallons of unprocessed materials in storage; 44,900 tons and 1.5 million gallons of materials processed per year; 25,400 tons of dry and 25,700 tons of wet wastes processed annually.	• New operation to replace placing these materials in landfill.	• In County or City.
Wood Recovery: Expand the volume of wood wastes to be processed; process wood in both City and County areas.	Maximum tons of wood wastes received per year not specified; maximum of 350 tons or 1,750 CY of materials on site at one time (RCUP and CLUP).[a]	10,000 CY or 25,000 tons of unprocessed wood waste in storage; 55,000 CY or 22,000 tons of shredded wood and mulch products in storage; 131,400 tons or 330,000 CY of wood wastes processed per year.	• 70 X increase in storage of processed and unprocessed wood waste (to 24,500 tons).	• In City; possible expansion into County.
Soil Reclamation: Add new operation and Biosolids/Dredged Material Spreading.	Not now included	20,000 tons of material awaiting processing in storage; 6,500 tons of processed material in storage; 195,000 tons processed annually.	• New operation; adjunct to composting and wood waste recovery.	• Shared area with wood recovery and compostin g operation (in City).
All Facilities:	Total materials on site not to exceed 46,950 tons or 47,500 cubic yards (RCUP and CLUP).[a]	Delete the all-encompassing total.		

a. RCUP = City of Richmond Conditional Use Permit; CLUP = Contra Costa County Land Use Permit

b. Conversion factors

Material	lb/cu yd
Compostables	747
Finished and unscreened compost	800
Concrete and asphalt	3175
Wood waste	500
Shredded wood and mulch	800

Note: The County is the Lead Agency under the California Environmental Quality Act (CEQA); the City of Richmond, County Environmental Health (LEA) and others are Responsible Agencies under CEQA. The LEA currently has permitting authority over the following proposed BMPC operations: Composting, Waste Recycling Center, and Wood Recovery.

Source: Land Use Permit Application, reference 28.

Table 3-2. Proposed Changes in Facility Operating Hours

Action	Existing timing of activities	Proposed permitting timing of activities
Equipment Maintenance: Change of hours of equipment maintenance	Maintenance, repair and servicing of construction equipment are currently restricted to the period from 7:00 a.m. to 6:00 p.m., Monday through Saturday.	Allow these activities to occur between 5:00 a.m. and 10:00 p.m.
Facility Operations: Change of hours of facility operations	Current transporting of BMPC materials schedule of 7:00 a.m. to 5:00 p.m., 7 days per week. Operation of concrete processing equipment; currently 7:00 a.m. to 5:00 p.m., Monday through Saturday Chipping and grinding of wood (fines are composted), currently 7:00 a.m. to 5:00 p.m. 7 days per week Waste Recycling Center not now included	Change to 24-hour transporting of materials as now allowed for the landfill operation. Change to 5:00 a.m. to midnight Change to 5:00 a.m. to midnight All activities associated with the Waste Recycling Center would be allowed on a 24-hour-per-day basis.

Source: Land Use Permit Application, reference 28.

Table 3-3. Summary of Proposed Waste Quantities to be Received at the BMPC

BMPC operations area	Average, tons/yr (365 days/yr)	Average, tons/day (TPD7)	Peak, tons/day (TPD)
1. Waste Recycling Center			
▪ Mixed waste area			
Public self-haul mixed waste	109,500	300	420
Commercial haulers mixed waste	255,300	700	980
Subtotal	365,000	1,000	1,400
▪ Organics processing area			
Public self-haul green waste[a]	8,200	22	31
West County commercial green waste[a]	57,500	158	221
Regional organics commercial haulers[a]	98,600	270	378
Wood waste haulers	131,400	360	504
Subtotal	295,700	810	1,134
Total Waste Recycling Center	660,700	1,810	2,534
2. Other Bulk Materials[b]			
▪ Concrete and asphalt materials	528,000	1,447	2,026
▪ Waste soil and dredged materials	195,000	534	748
▪ Wet wastes and powdery materials	51,100	140	196
Total Other Processing Facilities	774,100	2,121	2,970
TOTAL BMPC	1,434,800	3,931	5,504

a. Compostibles processed per year = 164,300 tons/yr or 450 TPD7.

b. Totals do not include biosolids from the WCWD treatment plant. About 24 MG of digested sludge per year would be piped to the landfill for spraying or spreading. About 12 tons per year of dried lagooned sludge is extracted from the treatment plant's drying lagoons during August and September and disposed of at the WCCSL as described in Section C2(g).

Source: West County Landfill, Inc. July 2003.

Composting at the WCCSL has been a phased development program, as follows:

- Phase 1 was a demonstration project completed in 1994 that provided water quality information regarding compost area runoff and offered observations regarding composting on the surface of the landfill.
- Phase 2 is a 27 TPD (365 days per year average or TPD7) project, which is the existing phase that began in November 1995. Initially, this project was conducted on the intermediate covered dormant portion of the landfill on the eastern end of the central mound, and later on portions of the final capped central mound. Only compostible green materials (yard debris) and wood waste were processed.
- Phase 3 is the larger-sized regional composting facility that is discussed below and is proposed as a component of this project. This phase is proposed to occur initially on the intermediate covered portions of the landfill and later on the final capped area of the WCCSL.

Current Permit Capacity. Currently allowed permit capacities under the County LUP No. 2054-92, City CUP No. 92-53, and SWFP No. 07-AA-0044 are as follows:

- 10,000 tons of compostibles received per year (specified in West County IRRF EIR).
- 11,600 CY of materials undergoing composting on site at one time (specified in SWFP).
- 5,000 tons of compost on site at one time (specified in City CUP).

The average daily throughput of compostibles is currently about 27 TPD7 (approximately 9,855 tones per year [365 days x 27 TPD7]).

Proposed Revised Permit Capacity. The proposed Composting Facility changes include expansion of the amount of materials processed, the handling of additional types of organic materials, and the ability to operate the Composting Facility in both the County and City areas. The new types of materials to be processed include food wastes, biosolids (wastewater sludge), mixed waste paper, and agricultural residues.

The Applicant has allocated a total of 20 acres for the Composting Facility. This includes the total amount of space available for the receiving area, grinding area, composting area, screening area, loadout area, wood waste processing area, and a soils reclamation area. (Note: The organics receiving area and grinding area are part of the WRC.) Directly adjacent to the Composting Facility is the Concrete/Asphalt Processing Facility (Figure 3-3), which has been allocated about 15 to 20 acres by the Applicant. The Applicant would like the flexibility to adjust the amount of space dedicated to the Composting Facility and to the Concrete/Asphalt Processing Facility based upon market demands and needs of the jurisdictions served to reach the AB 939 diversion goals.

The Applicant, therefore, proposes that the permits be amended such that the Composting Facility can be a maximum of 40 acres that could be located in both the City and County. This "flexible boundary" would allow for 94,400 total tons of all materials (green waste, wood waste, food waste, agricultural wastes, biosolids, mixed waste paper, soil, and finished products awaiting sale) on site at the Composting Facility at one time. The total tonnage of 94,400 includes 56,000 tons of materials undergoing composting; 12,800 tons of unscreened compost product in storage; and 25,600 tons of finished screened compost product in storage. As indicated in Table 3-1, 164,300 tons of compostibles are proposed to be processed per year. This is equivalent to about 450 TPD7. The Applicant further proposes that the permits limit the maximum number of tons on site instead of placing a limit on the number of tons that can be received in any given day. For example, some materials (such as compostibles) may be on site for over 90 days, while other materials (such as wood wastes or soil) may be on site for less than one week. The boundary available for composting and concrete debris recycling is shown on Figure 3-3, with more detail included in Appendix 3B.

Proposed Expanded Facility Description. The Composting Facility would utilize the organics receiving and processing area that is located adjacent to the composting operations and considered a part of the WRC (Figure 3-3). Materials to be composted would be moved from the organics area and placed into windrows. The windrows would be watered and turned as needed to optimize the decomposition process. Materials may be mechanically processed through a variety of screens, trommels, conveyors, sorters, blenders, baggers, colorizers, or mixers and stockpiled prior to being sold. Materials may be sold to either the general public or to wholesalers. Materials may be shipped off site in bags, pallets, pickup trucks, private vehicles, dump trucks, debris boxes, or transfer vehicles. Materials may also be used on the WCCSL site for various landscaping, operational, or alternative daily cover purposes.

b. Concrete/Asphalt Processing. The WCCSL BMPC Concrete/Asphalt Processing Facility consists of several main components, including a receiving area, crushing area, screening area, and a loadout area. The primary changes to the current permits for this facility are to increase the amount of material processed, for this facility to be relocated to the western plateau of the landfill's central ridge such that the majority of it would be located in the City and a portion of it within the County, and remove restriction on wet weather processing or storage of asphalt. A summary of the operations plan is included in Appendix 3C.

Current Permit Capacity. The following are the currently allowed permit capacities for the existing facility:

- Concrete debris – maximum of 30,000 tons or 24,000 CY on site at one time (specified in County LUP).
- Asphalt rubble – maximum of 1,600 tons or 800 CY on site at one time (specified in County LUP).

Proposed Revised Permit Capacity. The proposed Concrete/Asphalt Processing Facility changes include expansion of the amount of materials processed. According to the Applicant, recent facility operating experience indicates that more concrete debris will be stored at the WCCSL facility than the unprocessed asphalt. About 528,000 tons of rubble and debris can be processed per year.

Approximately 15 to 20 acres are identified for the Concrete/Asphalt Processing Facility, which will be relocated to the western end of the landfill central plateau. This includes the total amount of space allocated by the Applicant for the receiving area, crushing area, screening area, and a loadout area. Directly adjacent to the Concrete/Asphalt Processing Facility is the Composting Facility, which is about 20 acres (Figure 3-3). As discussed above, the Applicant would like the flexibility to adjust the amount of space dedicated to the Composting Facility and to the Concrete/Asphalt Processing Facility based upon market demands and needs of the jurisdictions served to reach the AB939 diversion goals.

The Applicant, therefore, proposes that the permits be amended to allow the Concrete/ Asphalt Processing Facility to occupy a flexible amount of the site area similar to the Composting Facility. The proposed County and City use permit changes would allow for 270,000 total tons (170,000 CY) of all materials (concrete rubble, asphalt rubble, brick rubble, and various sizes of reclaimed crushed rock) on site at one time. As indicated in Table 3-1, 528,000 tons of concrete and asphalt would be processed per year, which is equivalent to 1,438 TPD7. The Applicant believes that having a permit limit of the maximum number of tons on site is preferable to a limit on the number of tons that can be received in any given day. Some materials, such as concrete rubble, may be on site for over 60 days, while other materials, such as asphalt grindings, may be on site for less than one week. The boundary available for composting and concrete debris recycling is shown on Figure 3-3, with more detailed included in Appendix 3C.

Proposed Expanded Facility Description. The Concrete/Asphalt Processing Facility would have one primary receiving area that would consist of separate subareas for receipt of concrete rubble, asphalt rubble, and brick rubble. WCCSL personnel would direct traffic to the proper unloading spot, inspect the incoming materials, and remove any contaminants.

Depending on the type of incoming material and the amount of possible contamination, mechanized sorting conveyors, crushers, screens, trommels, and other equipment may be used to process the incoming materials. Loaders, conveyors, and other equipment may be used to move the material from each processing subarea and to load out finished products.

Materials may be mechanically processed through a variety of screens, trommels, conveyors, sorters, and stockpiled prior to being sold. Materials may be sold to either the general public or to wholesalers. Materials may be shipped off site in private vehicles,

dump trucks, or trailer trucks. Materials may also be used on the WCCSL site for various operational purposes.

c. Waste Recycling Center. The Applicant also proposes to construct a new WRC. The WRC would serve customers currently utilizing the Waste Shuttle Facility described previously in this chapter. Operations at the Waste Shuttle Facility would continue until the WRC is completed. In addition to relocation of this operation, the main difference between the WRC and the Waste Shuttle Facility would be the volume of materials handled and the addition of a loadout chute or a conveyor system to load non-recovered wastes into transfer vehicles.

The Applicant's primary purposes for developing the WRC is to (1) operate a waste recycling center and transfer station to handle self-haul volumes currently landfilled in the WCCSL, as well as capacity for new business (to be developed on an ongoing basis); and (2) achieve even greater diversion of materials from the waste stream than is accomplished now in the Waste Shuttle Facility. The design capacity of the WRC mixed waste processing area would be 1,000 TPD7, which would be intended by the Applicant to handle the existing self-haul and non-franchised wastes now received at the WCCSL, plus new business.

Under the proposed Project, the Central IRRF would receive the West County franchised wastes (subject to decision of the Authority) hauled by the packer collection service trucks and the roll-off box trucks. Alternatively, the franchised waste could be processed at the proposed WRC and reduce capacity available for the new business component within the facility's proposed design capacity. Any waste residues remaining after processing for recyclables would be hauled to Potrero Hills Landfill in Solano County once the WCCSL Class II landfill has reached capacity and is no longer receiving wastes for disposal (for a period of at least 5 years, disposal location to be used after that is subject to decision of the Authority through 2014).

The WRC has two parts in separate locations on the landfill: the mixed waste processing area and the organic materials processing area (Figure 3-3). The WRC mixed waste processing area would consist of several main components—a receiving area, a sorting floor where wastes would be sorted into trash and recyclables, an elevated picking line where the recyclables would be sorted, and a transfer vehicle loadout area. The WRC would also include the organic materials processing area, which is located adjacent to the composting operations. That area would consist of separate subareas for receipt of green waste, wood waste, food waste, agricultural wastes, biosolids, mixed waste paper, and soil. An operations summary for the WRC is included in Appendix 3D.

Current Permit Capacity. The Applicant has existing permits for some of the components of the WRC, including recovering recyclables from incoming waste, using mechanized processing equipment, and permits to move waste and processing residues from the processing area to the working face. Most of the mixed waste operations envisioned for the WRC are currently taking place at the landfill Waste Shuttle Facility. The Applicant proposes that the Soil Remediation Facility be revised from a contaminated soil processing operation to a waste recycling and transfer facility. The

organics processing operation (receiving and grinding green material and wood wastes) now occurs at the existing Composting Facility and wood waste processing area.

Proposed Permit Capacity. The former Soil Remediation Facility was approved to process up to 1,200 TPD7 of hydrocarbon-contaminated soil. Based on preliminary design information, and through adaptive reuse of an existing permitted facility, the design capacity of the WRC would be 1,000 TPD7, or sufficient capacity to handle 365,000 tons of mixed wastes per year.

Proposed Facility Description. The former Soil Remediation Building is the proposed location for the WRC. An alternative location and layout for the WRC (Figure 3-3) is in WCCSL Area A which is discussed in Chapter 13. The existing Soil Remediation Building is a long, narrow structure that has some constraints for adaptive reuse. Settlement of portions of the existing structure has occurred. The slurry wall bordering the Class I HWMF is about 38 feet to the south of the building, and proposed improvements to the building must consider the presence of the HWMF and its environmental containment features. For preliminary design purposes, the following features and improvements are considered for the WRC at this location:

- Adaptive reuse of the former 31,200-square-foot Soil Remediation Building (approximately 260 feet in length and 125 feet in depth).
- Extending the building about 110 feet to the east (13,200 feet) to create a dedicated commercial vehicle tipping area.
- Installation of a modular building for offices, employee restrooms, and a break room.
- Installation of an eight-bay recycling system.
- Site improvements for paving, drainage, and employee parking.
- Addition of perimeter landscaping.

The WRC would have two waste receiving and handling areas: the mixed waste processing area and the organic materials processing area. The mixed waste processing area would consist of separate subareas for receipt of recyclables, trash, and mixed loads of recyclables and trash. There would be several areas for the processing and removal of recyclables. Recyclables or recovered materials would be sorted and stored until shipped to markets or end users. WCCSL personnel would direct traffic to the proper unloading spot, inspect the incoming materials, and remove any contaminants. Loads containing all trash and any trash residue remaining after processing would be loaded into roll-off boxes, dump trucks, or transfer trailers to be hauled to the disposal site (either the working face at the WCCSL Class II landfill or Potrero Hills Landfill).

The size or volume reduction procedures that may be included in the WRC facility near the mixed waste processing area include two stationary compactors which may be installed for storage of recyclables such as cardboard and paper. Balers may be installed in the future. A low-speed, shear-type shredder may be included to preprocess non-recovered residuals prior to bailing them for transport to the landfill for burial. Trash and processing residues would be removed from the WRC on a daily basis, and the mixed waste area floor will be swept clean each night. If there are any partial loads of recyclables or trash, they will be containerized and stored until further processing.

The organic materials processing area is an existing open-air facility located adjacent to the Composting Facility and wood waste processing (mulch/biofuel) operation (Figure 3-3). This portion of the final capped landfill has been overtopped with a layer of crushed concrete and asphalt rubble to form a stable, all-weather access pad. Site users unload yard debris and wood waste on the access pad. Separate areas are maintained for wood and yard debris and, through a floor sorting operation, contaminants (e.g., metals, plastics, rocks, etc.) are removed prior to grinding the organic materials. The processed ground materials are then moved to either the Composting Facility or the wood mulch/biofuel production operation. WCCSL personnel would direct traffic to the proper unloading spot, inspect the incoming materials, and remove any contaminants prior to processing. Depending on the type of incoming material and the amount of possible contamination, mechanized sorting conveyors, grinders, screens, trommels, blenders, and other equipment may be used to process the incoming materials.

d. Wet/Dusty Material Blending. Processing of wet/dusty materials at the BMPC would be a new activity. The proposed new soil venture involves receiving high-moisture-content muds and sludges and blending them with waste soil to result in a mixture containing less than 50 percent moisture. In addition, dusty wastes would be mixed with the high-moisture-content materials, thus binding the dust-sized particles into the mixture. Most of the mixed material could be used at the WCCSL for alternative daily cover or for final cover. An operations summary for this process is included in Appendix 3E.

Current Permit Capacity. Wet/dusty material blending is not now included in either the City or County use permits. In 2001, operation of the Soil Remediation Facility was terminated by the Applicant. The volume of material proposed to be utilized in the wet/dusty materials process would be no more than what was authorized for hydrocarbon-contaminated soil in the former Soil Remediation Facility.

Proposed Permit Capacity. The amount of unprocessed wet wastes in storage on site would be up to 5,000 tons in stockpiles and 10,000 gallons contained in tanks. The quantity of wet wastes to be handled annually would be up to 25,700 tons and 1.5 million gallons. The dry dusty materials would be placed in the processing area at the time of delivery, unless special storage arrangements were taken. Annually, approximately 25,400 tons of these materials would be processed.

Proposed Facility Description. Two modes of operation are proposed, depending upon the availability of the former Soil Remediation Building. If the building were available prior to its use for the proposed WRC, the high-moisture-content wastes would be spread over a layer of dry soil placed previously on the asphalt floor of the building. Then, a rubber-tired loader or grader would mix the wet materials with dry soil until the proper moisture consistency is reached. The loader would be used to load the transport trucks. If mixing takes place on top of the landfill, it may occur inside a structure erected for that purpose. The facility is anticipated by the Applicant to be a 50-foot by 125 foot "U" shaped footprint composed of existing cargo containers appropriately painted and stacked two high with a flat truss roof. Otherwise, smaller amounts of the wet materials would be mixed with the dry soil in batches inside large metal bins. The bins would be located on top of the landfill plateau at the existing Waste Shuttle Facility. The mixing would be accomplished using an excavator equipped with a toothless bucket. After the mixing, the excavator would be used to load the transport trucks.

e. Wood Recovery. The Wood Recovery Facility is an existing activity of the BMPC. It is primarily a stockpiling and loadout operation. These operations would continue to occur within the Organic Materials Processing Area, which is within the larger Composting/Wood Waste Processing Area (Figure 3-3). This facility is currently within the City, but may expand into the County. An operations summary for this process is included in Appendix 3F.

Current Permit Capacity. County LUP No. 2054-92 and City CUP No. 92-53 do not specify the maximum tons of wood wastes to be received each year. Both permits specify, however, a maximum of 350 tons or 1,750 CY of materials on site at one time.

Proposed Permit Capacity. The wood waste receiving area shares the access area and unloading area used for the green materials. Approximately 25,000 tons (10,000 CY) of unprocessed wood waste material can be stored in the wood waste area. Approximately 10,000 CY of shredded wood products also can be stored in the wood waste area. Another 45,000 CY can be stored on the east slope of the landfill central plateau for a total of 55,000 CY or 22,000 tons in stockpile. Using this facility, about 131,400 tons of wood wastes can be processed each year (330,000 CY).

Proposed Facility Description. The Wood Recovery Facility operation involves receiving tree branches, woody vegetation materials and selected wooden construction debris that is shredded at the WCCSL. The shredded wood chip material may be screened to separate the sawdust-sized particles that can be composted. The wood chips can be used as boiler fuel (biofuel) or as landscaping and erosion control mulch. These materials would be temporarily stored and subsequently loaded out in transport trucks or used on site at the WCCSL.

f. Soil Reclamation. Soil reclamation would be a new activity at the BMPC. It would involve the reclamation of non-contaminated soils, which are currently delivered daily to

the WCCSL site and used as landfill cover material in an area adjacent to the composting and wood waste recovery operations.

Current Permit Capacity. As indicated above, the Soil Reclamation Facility would be a new component of the BMPC and no current permit limits exist.

Proposed Permit Capacity. The Applicant projects that about 26,500 tons of soil materials (20,000 tons of unprocessed and 6,500 tons of processed) may be temporarily stored on site, with excess soils used to augment the landfill cap during the postclosure period. About 195,000 tons of soil would be processed annually.

Proposed Facility Description. After closure, the WCCSL will continue to accept soil. Current procedures used to test soils for hazardous substance contamination would be continued. The primary soil reclamation operations would entail mechanical screening of soil to remove rock and debris. The screened soil would be separated into material suitable for trench backfill or building pad engineered fill, and also soil to be blended with sand, compost or dried biosolids to produce topsoil for off-site use. The soil reclamation would be conducted on the unused portions of the composting and wood waste recovery areas (Figure 3-3). About 2 acres are available for the soil reclamation operation sharing area with the composting operation.

g. Biosolids/Dredged Material Spreading. This operation would involve the spreading of wet dredged materials and/or biosolids (wastewater sludge) from the adjacent WCWD treatment plant on the southern or eastern slopes of the closed landfill (Figure 3-3). An operations summary for the reclamation of non-contaminated soils is included in Appendix 3G. The Applicant has been working with the WCWD to evaluate the technical aspects of applying biosolids from their treatment plant. A summary of the biosolids management plan is included in Appendix 3H.

Current Permit Capacity. As indicated above, spreading liquid (greater than 90 percent moisture) biosolids/dredged material would be a new component of the BMPC and no current permit limits exist. Current methods of handling the sludge include (a) use as ADC; (b) mixing with vegetative soil for the Class II site final cap during the cap construction; and (c) soil amendment to enhance the fertility of the in-place vegetative soil for both the entire Class II site and HWMF, through spreading of the biosolids as a thin layer on the existing final cap surface and tilling in or track walking it into the shallow surface layer of the cap as a single application for that year. Relative to soil amendment purposes, the RDSI and Closure Plans indicate that biosolids are to be applied one time per season on specified areas at agronomic rates to improve soil tilth and provide nutrients for enhanced vegetative growth.[1,126,127] Moisture content can be as high as 85 percent.

Proposed Permit Capacity. For the dredged material and biosolids drying area, the Applicant projects that 50,000 tons of these materials could be accommodated annually.

Proposed Facility Description. A second planned soil reclamation program is the spreading of wet dredged materials and/or biosolids (wastewater sludge) on the southern and eastern slopes of the capped landfill. The biosolids would be from the WCWD treatment plant and be greater than 90 percent moisture. Layers of materials would be spread down the hillside and dried by the wind and sunlight. Other soils may be alternately spread down the slope to be mixed when the biosolidsl/dredgings materials are removed for on- or off-site use. Potential off-site uses for removed sideslope materials include topsoil dressing for projects such as freeway landscaping and slide repairs, and replacement backfill for brownfield (remediation and redevelopment) sites where a soil backhaul is practical to fill excavations where materials were excavated for treatment or disposal.

The Applicant is continuing their program of working with the WCWD in management of the biosolids generated from the WCWD wastewater treatment plant. In 1999, the Applicant and WCWD executed a long-term agreement involving annual cleanout and disposal of dried biosolids from the treatment plant lagoons. The two entities have been working cooperatively to investigate possible ways that areas of the WCCSL could be used for biosolids drying, thus allowing for replacement or reduction of use of the existing WCWD biosolids lagoons. The Applicant's biosolids management program consists of the following:

- Use of the southern and eastern MSW landfill slopes as locations for the spraying or spreading and drying of high-moisture-content biosolids, involving multiple applications per year. Spread material would be left in place.

- Continuation of existing practice involving annual spreading of biosolids on final capped areas of the Class II landfill and the HWMF final cover to improve the growing conditions for erosion control vegetation.

- Processing of a portion of the biosolids in the Composting Facility.

- Blending of dried biosolids with soil at the Soil Remediation Facility to create specified fortified soil products.

The Applicant's biosolids management summary in Appendix 3H addresses primarily the application of biosolids to side slope areas, providing current information on segregation, storage, spreading, processing of the materials, and environmental controls. The plan includes options for transporting the biosolids to the WCCSL by truckload or a pipeline system for application during the dry season (April 15 through October 15). If by pipeline, the pipeline would be buried in a utility corridor alignment from the WCWD to the landfill's central plateau (Figure 3-3) where aboveground storage would be necessary.

High-moisture-content biosolids would be spray applied by tanker trucks or sprinklers in a uniform manner over the southern and eastern landfill slopes (Figure 3-3). After the

application has dried, additional biosolids would be applied. Drying would be accomplished by the sun and wind. Prior to full-scale implementation of the biosolids spreading, adjustments to the rates and methods of application would be made as needed to optimize the spreading process.

Dredged materials may be delivered to the WCCSL by barge or truck. If by barge, the barge would be temporarily anchored at the west end of the landfill and the dredged materials would be pumped or hauled by truck to the southern and eastern landfill slopes for spreading and drying. Runoff from the spreading areas would be controlled with on-site ditches and use of the Area B siltation control capability. The dried silt materials, if not left in place to provide a thicker landfill cap, would be pushed to the bottom of the slope and loaded onto trucks for off-site use, described earlier in this subsection.

At the WCCSL, receipt and application of liquid biosolids and dredged materials would be regulated by RWQCB Order No. R2-2002-0066 and the Applicant's Waste Acceptance Guidelines (Guidelines). These Guidelines are included in Appendix 3I. Prior to receiving the dredged material at the WCCSL, the project sponsor must supply the following information to the Applicant:

- Source area name, or project name as an identifier.
- Date of probable delivery of the material.
- Quantity of material to be delivered.
- Moisture content and manner of delivery (truck or barge).
- Chemical characterization (see Appendix 3I).
- Identification of any special conditions involved (odors, free moisture runoff, equipment needed to spread material, location of receiving area at WCCSL).
- Specification of specific operating protocols for the material to provide guidance for transportation agent and site personnel and contracted equipment operators needed to manage the material at the WCCSL.

h. Waste Diversion. County and City use permits required the Applicant to implement a resource recovery and recycling program at the BMPC facility to divert from landfills by January 1, 1995, not less than 25 percent of materials received at the facility and 50 percent by January 1, 2000. The WCCSL landfilling activities were not applicable. Adjustments to these diversion requirements can be made by either the County Board of Supervisors or the Authority. The resource recovery and recycling program includes not only the facilities proposed at the WCCSL, but also includes the Central IRRF operated by West County Resource Recovery Corporation, Inc.

Assuming implementation of the proposed Project, the projected diversion at the WCCSL and the Central IRRF is summarized in Table 3-4. At full capacity of the proposed Project facilities, 78 percent would be diverted from landfill disposal at the WCCSL, 85 percent at the Central IRRF, and 78 percent total (the Central IRRF tonnages do not affect the total due to their relative proportions to the WCCSL quantities). Thus, waste diversion at the WCCSL and Central IRRF would continue to be considerably above existing permit requirements.

Table 3-4. Projected Diversion Provided by Facilities at the WCCSL

Facility component	Waste received, TPD	Recycle/reuse, TPD	Remaining waste landfilled, TPD	Amount diverted, percent
WRC – Mixed waste area	1,000	250	750	25
WRC – Organics processing area	Included in composting or wood waste			
Composting	450	504	45	90
Wood waste recovery	360	324	36	90
Concrete/asphalt processing	1,450	1,450	0	100
Soil reclamation (soil reclamation + biosolids/dredged materials)	535	510	25	95
Wet/dusty materials	140	130	10	93
WCCSL Totals	**3,935**	**3,069**	**866**	**78**
Central IRRF (2002) Totals	150	128	22	85
West County Processing Totals	**4,085**	**3,197**	**888**	**78**

Source: WCL and Brown and Caldwell, January 2003.

i. **Traffic Generation and On-Site Equipment.** Traffic generation characteristics (average daily trips [ADTs] – total of both inbound and outbound trips) of the proposed Project are as follows:

Baseline conditions (2003), ADTs	2008, ADTs		2015 ADTs	
	Daily traffic	Net Project increase	Daily traffic	Net Project increase
2,250	2,580	330	3,220	970

Daily traffic count data represents the average 24-hour traffic during a peak month of landfill activity. The data was derived from a combination of vehicle counts at the WCCSL scales and manual traffic counts taken by Abrams Associates on the WCCSL access road. In 2005, it is assumed the landfill will close. By 2008, it is projected by the Applicant that the WRC would be at 85 percent capacity and other BMPC operations would be at 75 percent capacity. As can be seen, 330 ADTs could be added by 2008 over current conditions, and 970 ADTs by 2015. More detailed information is included in Chapter 8, Traffic and Circulation. In addition, a variety of equipment is currently used at the WCCSL. This information is included in Appendix 3J along with their projected usage with implementation of the Project.

j. Building Locations. Currently, there are 11 buildings located, or in the final planning phase, at the WCCSL. Figure 3-4 shows their locations. The five that are part of the proposed Project include the following:

- Relocated Office Building. A 20-foot by 60-foot wood-sided building that would house the operations manager of the BMPC.
- Modified WRC Building. Modified soil remediation building discussed earlier in this chapter.
- Relocated Equipment Maintenance Building. Approximately a 60-foot by 80-foot metal-sided, pre-engineered building surrounded by gravel roads and parking areas.
- Employee Break Building. An approximate 1,200-square-foot modular building for BMPC employees.
- Concrete Recycling Facility Office Building. A 15-foot by 40-foot wood-sided building for on-site office use.

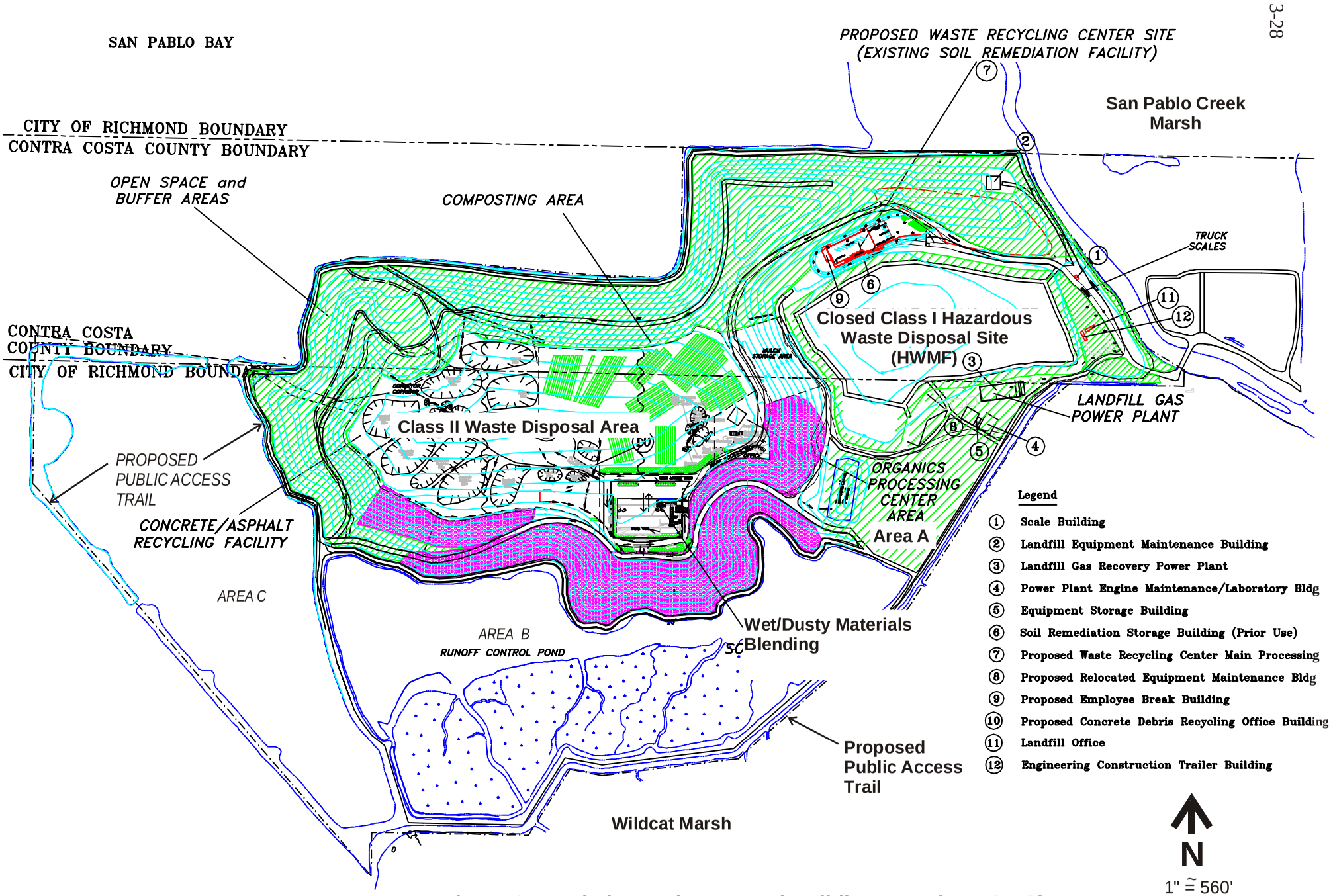
k. Control Measures. A summary of control measures included in the BMPC Project by the Applicant is included in Table 3-5. Control measures typically are procedures known to further reduce the potential for impacts based on regulatory agency requirements, standards in the industry, and operating experience. These control measures relate to hydrology and water quality, public safety, traffic and circulation, air quality, and noise. Further discussion of these control measures is included in the appropriate chapters of this EIR.

l. Site Circulation Plan. The site circulation plan for the WCCSL is shown on Figure 3-5. A transportation and circulation plan is a component of the FDIP and required by City and County use permits.

As required, key on-site roads are constructed for all-weather use and of sufficient width to accommodate two-way traffic. The internal roads that are used by the public are kept in safe condition, maintained such that vehicle access and unloading can be carried on during inclement weather. These roads are identified with suitable signage showing directions to the operating areas and speed limits are posted. The other roads used for landfill maintenance generally involve limited, one-way traffic.

3. Related Actions Requiring CEQA Review

Related actions requiring CEQA review include the Class II landfill height increase and the Public Access Trail.



Source: WCL. February 2003

Figure 3-4 Existing and Proposed Building Locations On Site

Table 3-5. Summary of Operational Control Measures Included in the BMPC Project

Potential impact	Operational control
Hydrology and Water Quality	
Composting and Concrete/Asphalt Processing Facilities	• Control drainage flows and provide silt collection
Waste Recycling Center	• Sweep unloading area at end of operating day • Prepare spill prevention control and countermeasure plan to address potential impacts • Runoff from impervious paved areas with potential pollutants contained in runoff and directed to oil/water separator or equivalent treatment system
Public Safety	
Waste Recycling Center	• Install LFG control system for processing building area in compliance with applicable regulations and permits
All BMPC Facilities	• Submit a project description to WCCSL Site Engineer and obtain approval before beginning any activity that could disturb or penetrate the landfill cap
Traffic and Circulation	
All BMPC Facilities	• Implement facility traffic circulation plan • Construct roadways of sufficient width and grade for safe vehicle travel • Install signs and barriers as designated in site signage plans • Comply with traffic and roadway maintenance activities identified in HWMF EIR

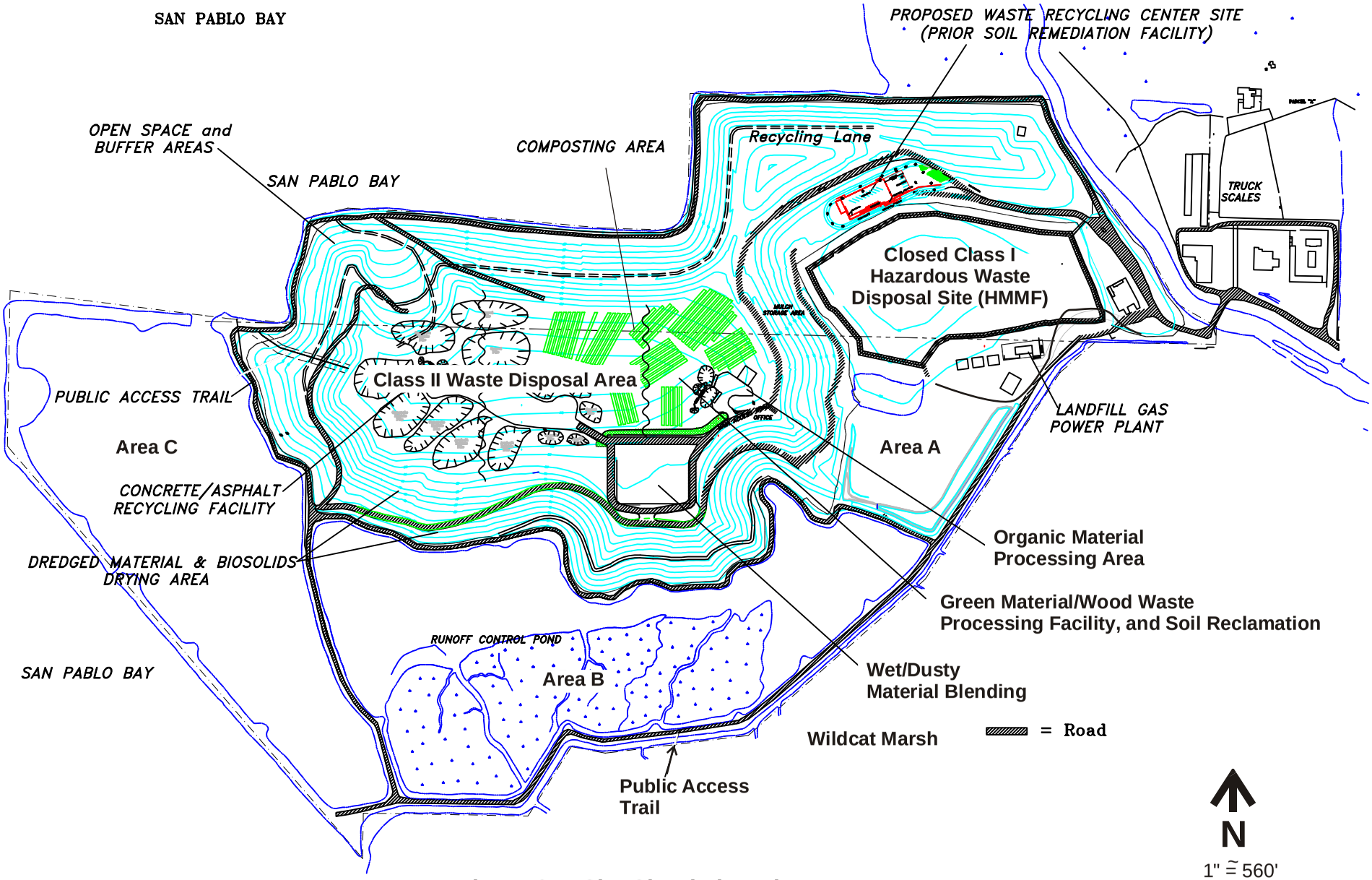
Table 3-5. Summary of Operational Control Measures Included in the BMPC Project (continued)

Potential impact	Operational control
Air Quality	
Composting and Wood Waste	• Routine facility fugitive dust and PM_{10} control measures will be implemented • Screening of finished compost will be suspended during highest winds if conveyor discharge shrouds or other wind blocking methods are insufficient measures • Screening equipment are subject to BAAQMD permit and oversight
Concrete/Asphalt Processing	• Routine facility fugitive dust and PM_{10} control measure will be implemented • Crushing and conveying equipment are subject to BAAQMD permit and oversight
Soil Reclamation and Biosolids/Dredged Material Spreading	• Routine facility fugitive dust and PM_{10} control measures will be implemented
Wet/Dusty Material Blending	• Routine facility fugitive dust and PM_{10} control measures will be implemented
Waste Recycling Center	• Routine facility fugitive dust and PM_{10} control measures will be implemented • Processing operation is subject to BAAQMD permit and oversight • Waste unloading and operations areas will be paved, or graveled and watered to prevent dust occurrence • Dusty waste materials will not be received or will be pre-wetted • Shredding equipment to be used in organics material processing area is subject to BAAQMD permit and oversight

Table 3-5. Summary of Operational Control Measures Included in the BMPC Project (continued)

Potential impact	Operational control
Noise	
All BMPC Facilities	• All operations equipment will be equipped with mufflers in good operating condition • Equipment operators will use appropriate hearing protection • Noise sources will be shielded by placement of storage piles or other measures if necessary to result in sound levels at the property line to be in compliance with permit conditions.

Source: Land Use Permit Application, reference 28.



Source: WCL, February 2003

Figure 3-5 Site Circulation Plan

a. Class II Landfill Height Increase. The 1996 Class II landfill final cap area located near the center of the central plateau was originally constructed with the ridgeline of the top-of-MSW fill at the 130-foot msl elevation. In June 2001, the level of the top-of-MSW in this area was found to be at an elevation of 115 feet. Thus, between November 1996 and June 2001, the top of waste fill had settled or subsided about 15 feet.

Over the 30-year postclosure period, it was originally anticipated by the Applicant that the final cap slope would subside at the same relative rate and, thus, the slope would be preserved and proper drainage conditions would continue to exist. However, the greater-than-anticipated settlement occurred underlying the ridgeline, creating a flat area on the landfill. If left uncorrected, continued anticipated settlement may result in the top of the landfill cratering and forming a depressed area that would not drain properly.

To correct this problem, the Applicant has been removing the final cap and placing additional MSW subbase fill. This will allow the foundation layer, barrier layer, and top landfill cover surface to be placed at the correct elevation and slope.

Proposed Final Grades. Figure 3-6 shows the proposed final grades of the landfill. The elevations shown represent the top of the landfill wastes. The final cover cap, consisting of 7 feet of soil, would lie above these elevations. The implementation of the grading plan would result in an east-west ridgeline that generally ranges between elevations 110 and 160 feet msl. It is projected by the Applicant that 10 to 15 years after site closure, the elevations of the ridgeline will decrease by 20 feet due to waste settlement and consolidation of underlying Bay Mud, and removal of leachate from the base of the liner within the Class II disposal area.

The east-west ridge will appear as a long mound with a small valley or drainage swale between the Class I and Class II sites. Drainage details are shown on Figure 3-6. Ultimate final perimeter slopes of 4:1 (horizontal:vertical) will be established between elevations 10 and 110 feet msl. Above elevation 110 feet msl, a maximum slope of 10:1 will be created for subsurface soil stability, as recommended by the Applicant's soil engineering consultant. To achieve the planned slopes, the exterior lifts are overbuilt to allow for expected settlement and consolidation.

Site Life. The history of site life estimates for the landfill has shown that a variety of factors contribute to extending the landfill life. These factors include: the weight of the stockpiled soil compacting the buried wastes, leachate pumping (removal), landfill diversion through materials recovery, ongoing decomposition of underlying wastes, compaction by heavy compactor tractors, and use of ADC to reduce soil use and save some air space (landfill capacity).

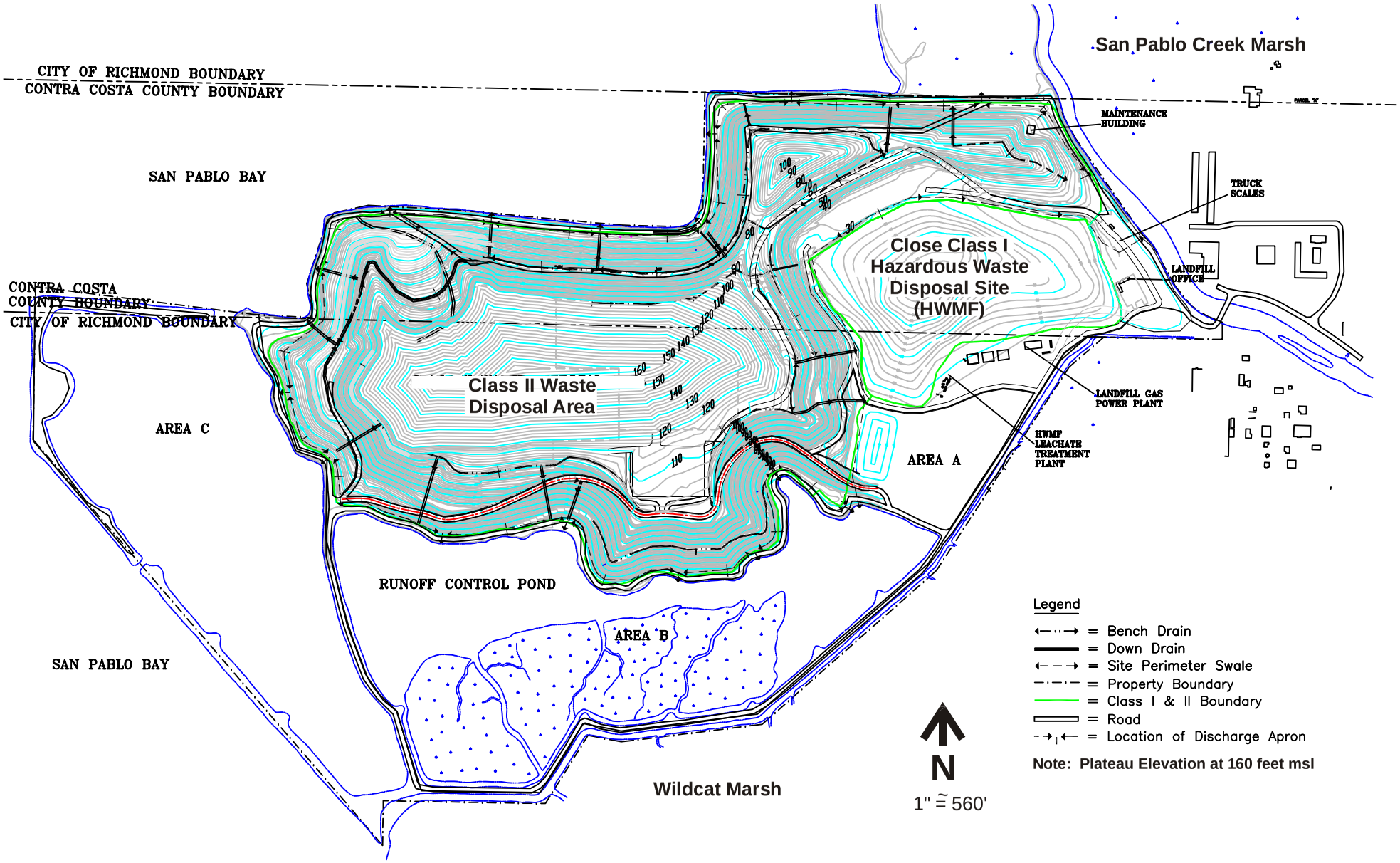


Figure 3-6 Proposed Final Grading Plan

Source: WCL, February 2003

The most recent landfill site life estimate indicates that the total amount of wastes estimated to be in place in the Class II site was about 19,299,000 CY or 10.6 million tons as of May 31, 2002.[38] Remaining waste capacity exists across the central plateau area where the final cap areas are being adjusted, and in the northeastern corner of the landfill where the former Soil Remediation Building is located. This is the location of the proposed WRC. If the Applicant were to fill in this area in lieu of using it for the WRC,the volume of available disposal space is about 510,600 CY. Two alternative filling plans for this area are being developed for this area and will be included as Figure III.A-7 of the RDSI.

Table 3-6 summarizes the current site life estimate for the Class II landfill for various scenarios that include different assumptions for landfill height, disposal rate, density, and whether the former Soil Remediation Building remains in place for use as the WRC. The 130-foot height is the currently permitted height, while the 150- and 160-foot heights are variations of the proposed vertical expansion. As can be seen from the table, with no vertical expansion and keeping the building in place as of June 2003, only 5 months of disposal capacity remain and the site would be filled by the end of October 2003. If, however, the permitted height were increased to 160 feet and the building were removed, then about 44 months of disposal capacity would exist and the site would be filled by September 2006. The RWQCB has ordered that the WCCSL Class II landfill cease burying waste on or before January 31, 2006.

Table 3-6. Remaining Life of West County Landfill (From June 1, 2003)

Landfill height, feet	With building, months[a]		Without building, months[b]	
	Months	Date site filled	Months	Date site filled
130	5	Oct. 2003	20	Feb. 2005
150	17	Nov. 2004	33	Mar. 2006
160	22	Apr. 2005	39	Sept. 2006

a. Assumes a disposal rate of 850 TPD7 and a landfill density of 1,100 lbs/CY.
b. Assumes a disposal rate of 800 TPD7 and a landfill density of 1,200 lbs/CY.

Note: The two different disposal rates and densities are part of a sensitivity analysis used in the site life analysis process. This provides a range in the site life which is applicable since the tonnage and density may vary during the following years.

Source: WCCSL, Inc., reference 121, as updated by the Applicant in June 2003.

On-Site Processing Areas and Construction Specifications. According to the Applicant's RDSI, the final cover cap consists of a minimum of 4 feet of soil consisting of:[1]

- Two feet of foundation cover soil.
- One foot of clayey soil with a maximum in permeability of $1x10^{-6}$ centimeters per second (cm/sec). (An equivalent or better low permeability engineered final cap containing geosynthetic clay (GCL) is proposed by the Applicant to the RWQCB to be substituted for the 1-foot-thick clayey soil layer.)
- One foot of soil suitable for vegetative growth.

All permanent processing locations would be underlain by the final landfill cover. An additional 3 feet of protective soil will be provided in these postclosure BMPC operations areas.

Construction performance specifications regulate postclosure land uses on the final landfill cover cap to assure that the integrity of the final cover, drainage and erosion control systems, and gas monitoring and control systems are maintained (Appendix 3A). Pursuant to 27 CCR §21190, proposed postclosure land uses shall be designed and maintained to:

- Protect public health and safety and prevent damage to structures, roads, utilities and gas monitoring and control systems;
- Prevent public contact with waste, LFG, and leachate; and
- Prevent explosions from LFG accumulation.

To guide the planning of future site uses, performance standards have been developed by the Applicant for the WCCSL that embrace the intent of 27 CCR §21190 (a) through (f). The following performance standards are considered for each proposed BMPC Project component:

- Final cover inspection and maintenance—The final cover underlying the zone to be occupied by the proposed BMPC Project components will be inspected annually under the landfill postclosure monitoring. Specific potential impacts to the landfill cap are listed and specific monitoring activities or construction inspection and observation protocols are developed. After construction is completed, as-built drawings are prepared and filed as part of the postclosure plan background details. No subsequent construction or grading that may penetrate the cap will be allowed without prior approval of the WCCSL Site Engineer. Annual

inspections by the WCCSL Site Engineer shall include observations to detect any non-approved site modifications.

- Landfill grading and drainage system inspection and maintenance—Within the zone to be occupied by the proposed BMPC Project components, the annual landfill monitoring program will include observation of the final grading and drainage pattern within the zone. The development plans are required to evaluate the potential for occurrence of settlement of the landfill surface. The development plans must accommodate the anticipated settlement. Any regrading shall be approved by the WCCSL Site Engineer. Areas of differential settlement that interfere with the planned drainage concept will be identified and scheduled for regrading.

- Slope protection and vegetation inspection and maintenance—The proposed BMPC Project components will be evaluated to determine if special slope protection is required. The annual landfill monitoring program will observe the condition of the slope protection devices and installations and the status of planted erosion control vegetation. The activities associated with the land use are reviewed to determine if such activities are interfering with the slope protection or if the vegetation growth is being impaired. Any areas requiring erosion correction or replanting will be identified and scheduled.

- Leachate control and treatment system operation, inspection and maintenance—The potential use of water is estimated by the Applicant and the control of the water is evaluated. Annual reports of the amount of water utilized shall be reported to the WCCSL Site Engineer. Annually, the proposed BMPC Project components will be evaluated to assure that water usage, drainage, or disposal is not penetrating the landfill cap or is causing leachate generation.

- Gas control system inspection and maintenance—Within the zone occupied by the proposed BMPC Project components, LFG monitoring is established as necessary. The LFG monitoring details are ascertained and implemented during construction of the facilities. LFG migration controls also are planned and built into the facilities as deemed necessary. The monitoring is included in the existing standard WCCSL LFG monitoring program for on-site structures.

- Groundwater monitoring network inspection and maintenance—All proposed land use developments are reviewed to determine none of the groundwater monitoring wells will be damaged by construction or operation activities.

b. Public Access Trail. The concept of creating a shoreline Trail has been envisioned for many years, and has been referenced in several regional and site-specific planning documents, including the County and City use permits and the North Richmond Shoreline Specific Plan and associated EIR.[5,6] The Trail at the WCCSL would be a segment of the San Francisco Bay Trail, a planned 400-mile recreation and transportation corridor that will encircle the entire Bay, linking the shorelines of nine counties and 47 cities.

City and County use permits for the BMPC included requirements for conducting a feasibility analysis and preliminary planning for public access along the WCCSL site perimeter to allow access to the Bay shoreline, and for implementing the access as it is determined to be feasible. From 1992 to present, planning for the Trail was conducted and various iterations of the Public Access Trail Development Plan were developed. The current version of the Public Access Trail Development Plan is included in Appendix 3K. A brief summary is included below.

Phased Development and Trail Alignment. The Trail is proposed to be developed in phases. The purpose of phasing the development of the Trail would be as follows:

1. To allow access to portions of the Trail while the landfill is still accepting wastes for disposal.

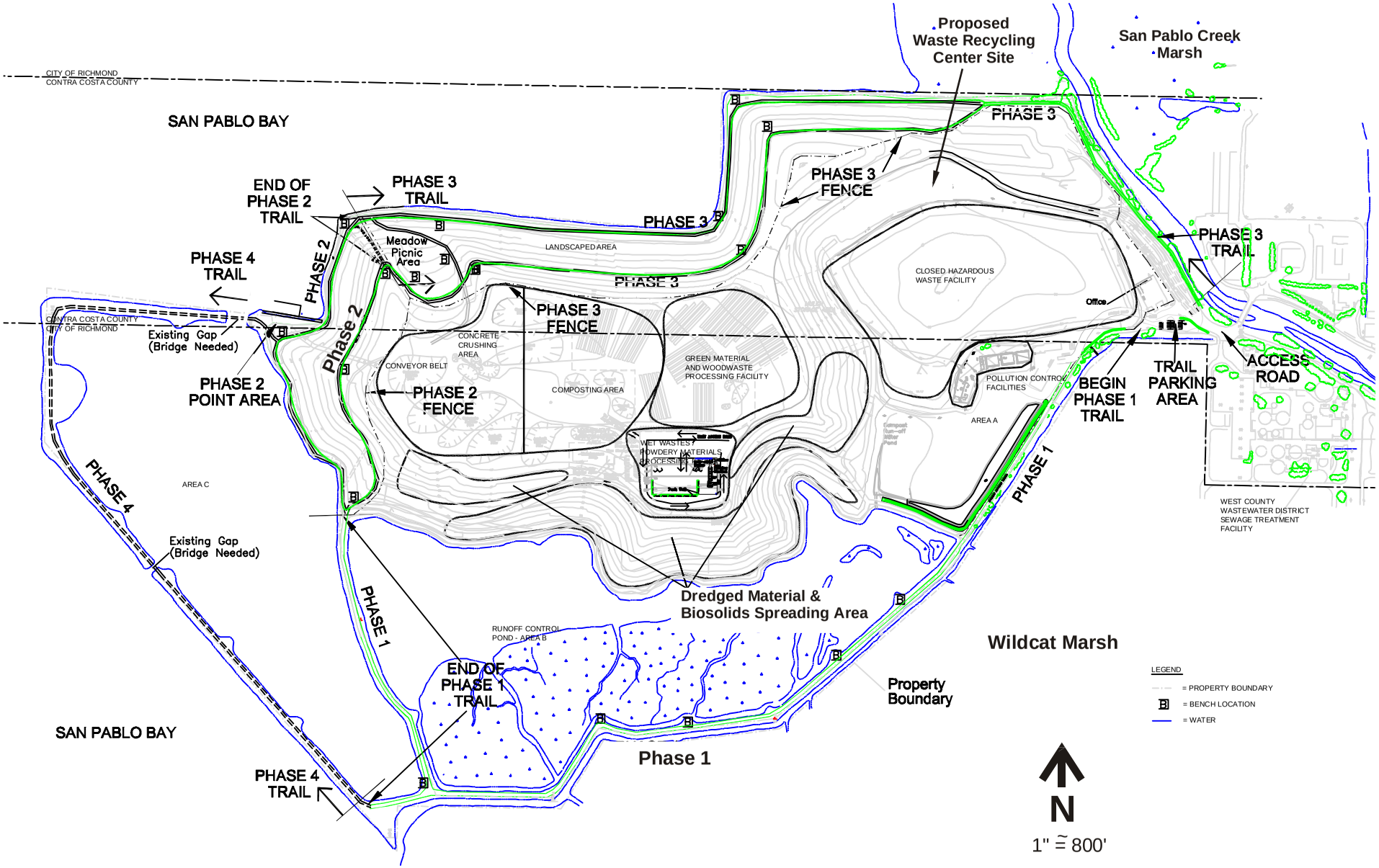
2. To provide access to portions of the Trail while funds are located and permits are secured that will allow for Trail extension in the future.

3. To initially gain operations experience on a smaller portion of the Trail so that the later phases of the Trail can be developed based on experience gained.

The Applicant would modify the development plan in order to comply with permit limitations or operational issues as they are identified.

Figure 3-7 shows the alignment of the Trail and its four proposed phases of development. The alignment would be along the existing levee roads that form the outer edge of the landfill and that delineate the WCCSL property. Bench locations for Trail users are also shown on the figure.

- **Trail Parking Area.** A graveled Trail parking area would be located at the eastern end of the landfill property (Figure 3-7). Visitors would park within the designated parking area, which would meet code requirements for handicapped parking. Improvements would consist mainly of traffic control barriers that would designate the limits of the parking area and its entrance roadway. There would be space for 15 vehicles and a bike rack would be provided. Restroom facilities may also be located in this area.



Source: WCL. February 2003

Figure 3-7 Proposed Public Access Plan Conceptual Design

- **Phase 1 Alignment.** The Phase 1 Trail would extend from the parking area in a westerly direction, initially along some of the currently active operations areas of the landfill. These areas include the Class I HWMF, the Landfill Gas Power Plant, a maintenance building, and a soil stockpile area in Area A. The soil stockpile area in Area A is an alternative site for the WRC, which is discussed in Chapter 13 of this EIR. Along this section of the alignment, the northern edge of the Trail would be bounded by a berm and permit-required chain link fence topped with barbed wire to prevent access by Trail users to landfill operations.

  The Phase 1 Trail would extend along the existing southerly levee roadway, which separates Area B and marshland to the south. Near Area C, a side spur trail would extend a short distance where a potential kayak and canoe launching area would be located. From this point, the Trail would extend north to the southwest corner of the Class II landfill, where it would terminate and Trail users would turn around to return to the parking area. The Phase 1 Trail is about 1.3 miles (one way).

- **Phase 2 Alignment.** The Phase 2 Trail alignment has a lower Phase 2 segment and an upper Phase 2 segment. The lower Phase 2 segment would be about 0.3 mile in length and would run along the western perimeter of the landfill's shoreline at about the 15-foot elevation. This segment of the Trail would end at a fence adjacent to areas where the Applicant will continue to landfill solid waste and where the final landfill cap would be placed during 2004 and 2005. A second potential kayak landing would be located in this area. Trail users would double back at this point and return to the parking area. The total length of the Phase 1 and Phase 2 Trail is about 1.6 miles. The Applicant would endeavor to open the lower Phase 2 Trail at the same time as the Phase 1 Trail if feasible from a technical and public safety standpoint.

  The upper Phase 2 Trail segment would be about 0.2 miles in length and would parallel the lower Phase 2 Trail at an elevation of about 50 to 60 feet above the Bay level. There would be a short connector trail to link the lower and upper Phase 2 Trails, which would enable Trail users to loop rather than double back. As shown on Figure 3-7, cyclone fencing would be installed to prevent Trail users from accessing landfill operations.

- **Phase 3 Alignment.** The Phase 3 Trail alignment would complete the loop around the WCCSL property and would also have two levels. The upper Phase 3 Trail would continue along the 60-foot elevation for 0.5 mile and rejoin the Phase 3 shoreline Trail. The upper Phase 3 Trail would also contain a contoured west wind-protected "meadow" area which could be used as a picnic area and vista point for Trail users

(Figure 3-7). At the northeast corner of the property, the Trail would turn and proceed along San Pablo Creek and pass by the WCCSL scale house and terminate at the Trail parking area. A designated crossing would be provided in this area. The length of the Phase 3 shoreline level Trail segment would be about 0.8 mile.

- **Phase 4 Alignment.** As shown on Figure 3-7, the Phase 4 Trail alignment would loop around Area C. Because the levee around Area C has been breached to allow for tidal action, two pedestrian bridges would need to be constructed. The Phase 4 Trail alignment would be expensive and more complicated from a permitting standpoint and, thus, the timing of its development is uncertain. The length of the Phase 4 segment is about 0.4 mile.

Trail Improvements. The following Trail improvements have been identified and are discussed more thoroughly in Appendix 3K:

- The Trail surface would be compacted gravel and routine maintenance would be provided. Trail construction would not involve extending into adjacent marshlands or open water areas and no discharge of materials to these areas would be allowed.

- An interpretive program is being developed by the Applicant which would require access to the shoreline at the southern end of Area C. A staging area is being considered by the Save the Bay Association at this location which would be used for canoers and kayakers as part of an educational program for school children.

- Planting recommendations are being developed by the Applicant to control the spread of invasive exotics and to establish a protective buffer of native vegetation between the proposed alignment and adjacent marsh and open water habitats. The Applicant may plant suitable landscaping in the meadow picnic area (Phase 3 Trail) to enhance this area. Permanent fencing would be landscaped appropriately.

- Fencing and access control features would be installed to provide for the safety of Trail users and the protection of landfill environmental control systems. An entry gate would be installed to preclude access to the Trail by horses and motorized vehicles. Fencing materials would be selected to minimize visual impacts.

- Appropriate signage and interpretive aids would be installed along the Trail alignment.

- Several bench and rest areas would be created and trash and recycling cans would be placed at these locations. Picnic tables may be placed in some areas.

- Restroom facilities may be placed in the parking area and the Phase 2 Trail point area.

- The Trail alignments are landfill maintenance routes and when equipment is utilized on sections of the Trail appropriate safety measures would be taken to protect or exclude Trail use at that time.

Development Schedule. The Trail would be developed in phases, as discussed above, to enable segments of the Trail to open prior to landfill operations ceasing. The currently proposed Trail development schedule is as follows:

Trail Segment	Projected opening date
Phase 1	December 1, 2003
Phase 2	December 1, 2004
Phase 3	December 1, 2007
Phase 4	9 months after securing funding

Actual opening dates for Phases 2 and 3 could vary depending on the progress of landfill filling and closure. It is expected that the lower section of Phase 2 could be opened at the same time as Phase 1.

Hours of Trail Operation. The Trail would be open from dawn until dusk during those days business operations (e.g., the landfill, Composting Facility, proposed WRC) are open. The Applicant reserves the right to limit access to the Trail or to close the Trail at any time as may be required for public safety, Trail maintenance, and for landfill management. The WCCSL currently closes on New Years Day, 4th of July, Thanksgiving and Christmas.

4. Schedule

According to the most recent remaining capacity analysis by the Applicant, the landfill will close in 2005, assuming the landfill height is increased to 160 feet msl and the WRC is sited as proposed[58]. The WRC would be opened in 2005, as well. By 2008, it is anticipated that the WRC would be at 85 percent capacity and other BMPC operations would be at 75 percent of capacity. By 2015, all BMPC activities would be at full capacity.[55]

5. Permits and Approvals

Numerous permits regulate activities at the WCCSL. The following list shows which existing permits will be affected by the proposed Project application:

Permit title and number	Issuing agency
Conditional Use Permit, 1993 No. 92-53	City of Richmond
Land Use Permit, 1993 No. 2054-92, 1995 No. 2043-94	Contra Costa County
Solid Waste Facility Permit, Landfill, 1998 No. 07-AA-001	LEA/CIWMB
Composting Facility Permit, 1996 No. 07-AA-0044	LEA/CIWMB
Waste Discharge Requirements, 2002 Order No. R2-2002-0066	RWQCB
NPDES Permit No. 2 07S005532	RWQCB
Authority to Construct/Operate (annual) Plant No. 1840	BAAQMD

A new LEA/CIWMB Solid Waste Facility Permit will be issued (in addition to the two shown above) to include the regulated operations of the WRC. SWFP No. 07-AA-001 will be revised to include the landfill modifications as well as all other BMPC additions and changes, exclusive of the Composting Facility and the WRC. Tables 3-1 to 3-3 summarized the permit changes that would be required. In addition, a permit would be required from the Bay Conservation and Development Commission for development of the Trail.